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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:
Ayub Fathimulla et. al.

Art unit: 2826

Serial No. 10/621,203

Examiner: FORDE, Remmon R

Filed: July 17, 2003

For: MONOLITHIC PHOTORECEIVER TECHNOLOGY

AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

Sir:

In response to USPTO communication dated Feb.14, 2005, please amend the application as follows:

IN THE CLAIMS:

Claims 1-13 (canceled)

Claim 14 (currently amended) A monolithic optically pre-amplified photoreceiver, comprising
a common substrate;
vertically integrated vertical cavity surface emitting lasers (VCSEL) as optical
preamplifier; and
vertically integrated optical converters and
monolithically integrated Trans-impedance Amplifier (TIA), control and decision
circuits using Resonant Tunneling Bipolar Transistor (RTBT).

Claim 15 (original) The monolithic photoreceiver as described in claim 14, wherein said
optical converters are selected from the group of :PIN diode, resonant cavity enhanced photodiode
(RCE); an avalanche photo diode (APD); PIN diode formed using base collector junction of the
heterojunction bipolar transistor; a heterojunction phototransistor; resonant tunneling diode
embedded in intrinsic layer of PIN diode; and a QWIP.

Claim 16. (original) The monolithic photoreceiver as described in claim 14, wherein said
optical converter is integrated with TIA, control and decision circuits.

Claim 17. (canceled)

Claim 18 (original) The monolithic photoreceiver concept and teh integration approach as